



Parallel Systems, Contrasting Results

# THERMINOL.66

Delivers Superior Performance for Grupo Primex

Reliable heat transfer fluids are vital to the ability of manufacturers to operate efficiently and productively. However, some heat transfer fluids can degrade over time, resulting in deteriorating performance, impacting operating costs and product quality. With these possible consequences, how can manufacturers ensure they are choosing the right heat transfer fluid, and prevent these problems from occurring?

Grupo Primex – Latin America's largest manufacturer of PVC resins, phthalic anhydride, plasticizers and PVC compounds – operates two parallel heat transfer systems that present a unique comparison. Solutia Inc.'s Therminol® 66 heat transfer fluid has supported one of these systems for more than 15 years. A diaryl alkyl chemistry product, rated to 350 °C (660 °F), has been utilized in the second system over the past five years.

## Contrasting Results

Since the 1980s, the system supported by Therminol 66 has performed without problem. However, after just three years, the system utilizing the alternate heat transfer fluid began to demonstrate a decline in performance.

**“Customer service – such as that provided by Solutia's TLC program – is invaluable.”**

-- Francisco Nava  
Production Manager  
Grupo Primex

Francisco Nava, production manager for Grupo Primex, describes the escalating problems. “First we experienced pluggage in our instrument tubing. Soon after, we observed damage to the mechanical seals and problems began occurring in the heat transfer process. As a result, we were experiencing losses

in distillation efficiency, increases in system vapor pressures, increased unplanned downtime, and impacts to our finished product quality.”

## The Decision to Change

Grupo Primex turned to the technical support team at Solutia for a complimentary fluid analysis, part of Solutia's Total Lifecycle Care Program (TLC). According to the analysis completed by Solutia's team, the non-Solutia fluid was degrading rapidly, reducing its ability to operate efficiently. In fact, the degradation products were found to be more than half of the fluid composition and the fluid was forming precipitates of crystalline solids under certain conditions.

“Because the alternate heat transfer fluid wasn't doing a good job, our pump seals were failing and we were losing yield. At the same time, our system utilizing Therminol 66 heat

transfer fluid was operating smoothly. The decision to switch to Therminol 66 in the other system was clear,” said Nava.

The transition to Therminol 66 will be made in June 2005. Additionally, Therminol FF Flushing Fluid will be utilized to clean Grupo Primex’s system of the degraded fluid.

### Expected Results

According to Nava, “In the 15 years that we have operated our system using Therminol 66 heat transfer fluid, we have never experienced downtime or other problems

like those experienced with the alternate fluid. We expect that cleaning our other system with Therminol FF and switching to Therminol 66 will yield the same consistent, outstanding results.”

Mr. Nava’s advice to other manufacturers when choosing a heat transfer fluid? “In addition to looking at the efficiency and life span of the heat transfer fluid, our experience demonstrated that customer service – such as that provided by Solutia’s TLC program – is invaluable.”

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